W.C. Burleigh Papers

McGivern

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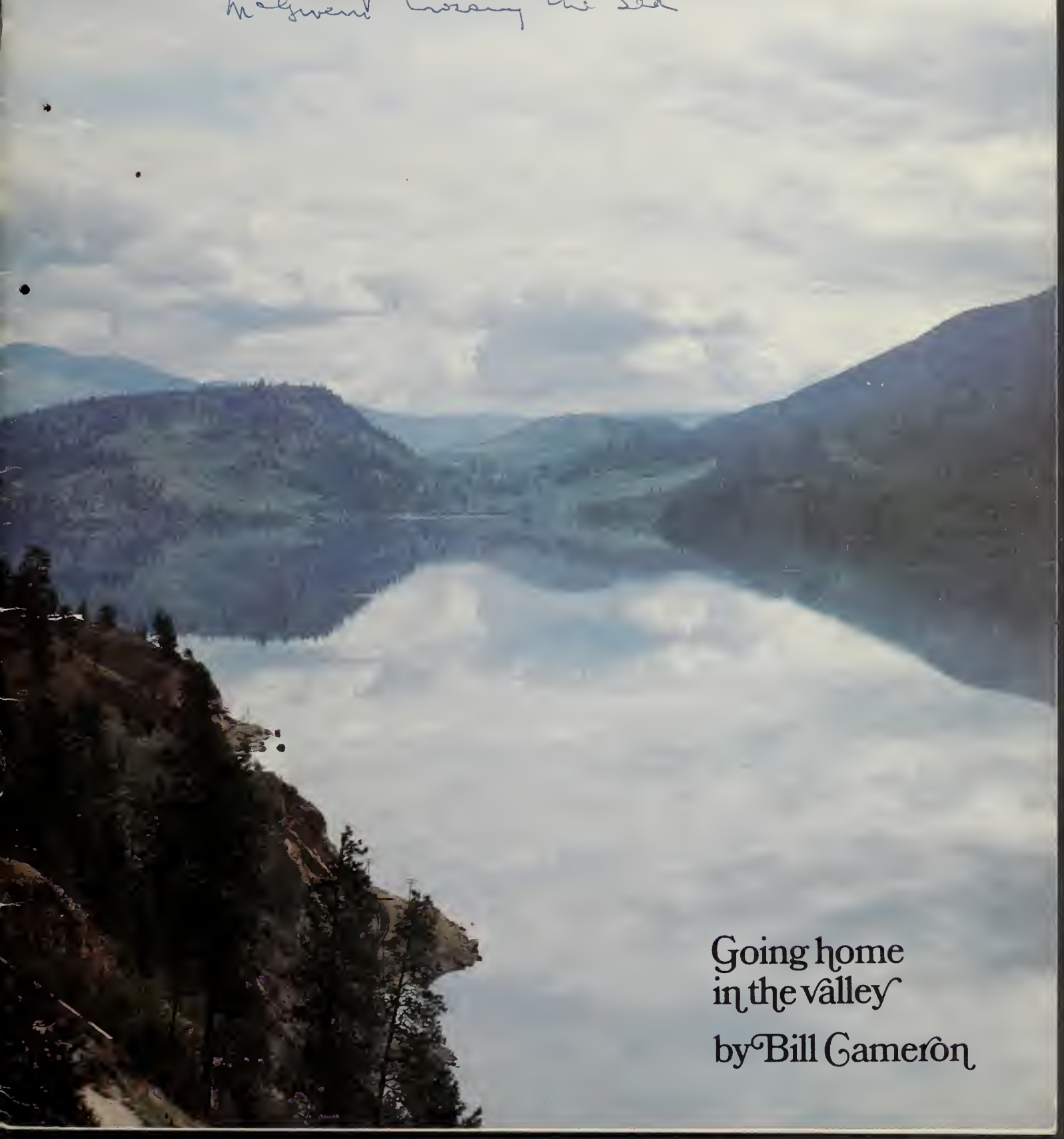
Pedegree of Father McGovern M.E
McGovern Crossing the Sea



Going home in the valley

by Bill Cameron

Growing young again

Going home to an Okanagan memory

by Bill Cameron/illustrations by Joan Affleck

My grandfather, Russell Sinclair Bingham, was a cattle rancher near Weyburn, Sask., until the Great Depression killed his stock. He left his ranch in the late thirties, with no debts and no savings, and worked on other mens' farms on the west coast through the war and after it, until he had saved enough to buy some land on Woods Lake, near the town of Oyama, in the Okanagan Valley of British Columbia.

There is not a great deal to distinguish the town of Oyama from the other lakeside farmers' towns in the valley. It was settled at about the same time, at the end of the great immigration in the first years of the century, by the English, Irish, Dutch, and Japanese, and it was finally named (over some local objection) after a Japanese soldier who had distinguished himself in the war against the Russians in 1905.

The valley was and is a miraculous fruit-growing land: cherries, apples, apricots, peaches, plums, grapes, strawberries, all came off the trees and the vines with a tight sweetness that charmed the mouth and (to the immigrant) tasted like money. In the brown scrub at the tops of the hills above the lakes, some madmen tried to raise cattle and failed; but with a little luck and a lot of imagination you could make a living growing fruit in the Okanagan Valley. A living and maybe a little more.

Russell Sinclair Bingham came late, in his fifties. His neighbors called him the senior citizen. He built a house and put in his trees and survived.

When I was eight years old, Vancouver was home in the damp gray season that passes for winter there. But in the summer the farm was home. The day after the last day of school my mother, father, sister, and I would drive out of the city, up through the mountain towns that stood like goats on the sides of the rocks, and then down into the Okanagan Valley, with its twisted sequoia trees and tumbleweeds and fruitstands beside the road: CIDER, FRESH PEACHES, YOU PICK 'EM.

Left to itself the land in the valley is light brown, a hard and dusty desert covered with thin brush. Given water it darkens and softens and produces trees with crocodile-green leaves and glossy fruit: cherries like garnets and golden peaches with a dust of pink. As we rode along the valley the desert receded and the watered orchards took its place, spreading up the hills from the lakes. Past Kelowna, at the tip of Lake Okanagan, where the water-monster Ogopogo lives, past Winfield, and suddenly Woods Lake, our lake. You could see where the farm was, many kilometres away across the water. Through Oyama we went, up the back road past Dr. Lett's Anglican church, then down again, sharply down on a dusty dirt track, past the graveyard, straight down, brakes full on, the car tilted so steeply we were always sure it would fall, through the cherry trees and past the beehives to a stop by the house, for hellos and compliments and a chicken dinner.

"Well, well," my grandmother would say, "*you've* grown," and we always had. My sister and I would look at the marks of last year's height on the wall in the kitchen and feel the momentousness of a year. And then in the long evening we'd run through the trees down to the lake to make sure it was still there and that there were still flat stones to skip out over the water.

Summers meant swimming (once learning the dead-man's float on the last day of summer) and secret rowboat excursions (once to Rattlesnake Is-

land, forbidden because of its name) to step quickly on the shore, once, and row away, and books on the sand, my mother with *Lorna Doone*, me with science fiction (I was thin, wore thick glasses, and was going to be a scientist), my sister paddling in the shallows without any book at all.

Summer has not changed, but the way I spend it has. I live in the city now, and in the summer I use my time seeing other cities in other countries. For 25 years it did not occur to me to go back to Oyama. My grandfather was dead, his daughter (my mother) was dead, my grandmother had moved, the farm was taken by kind but not intimate relatives. The connection with the people had been broken, and it did not seem to me that I had much connection with the place.

But in the summer of 1978 I was 35, half-way through the term the Bible allows. Suddenly, my mathematical past was longer than my mathematical future, and I could not remember well enough, not enough to tell what was recalled and what was imagined, whether the lake was blue or green or gray, how far it was from the house to the railway tracks, or the sound of anything.

So I went back.

The drive was still east from Vancouver, through the mountains, but this time in a rented car and with different people. My stepmother for my dead mother; my girlfriend for my sister; my father and I, 25 years older and each changed beyond understanding, because now I drove, my girlfriend sat beside me, and my father and my stepmother sat in the back seat, where the children had been.

"You won't remember this hill," my father said, "but this is the hill where the car always boiled over. We'd have to stop two or three times and let the rad cool off. Better highway now."

"I remember," I said, not remembering.

And later: "And very soon now, as we get down into the valley, you run into the first stand of sequoias, there's a right-hand turn, almost a hairpin turn, and then a place you can get off the road."

"I remember."

And into Kelowna and through it and beyond, and I did begin to remember.

There are more motels now, on the highway side of the lake, and there is an amusement park with a wavy metal slide, but the Oyama crossroads is still the same, with the garage and the general store and the Kalwood gas-pump restaurant. Someone has put in a new track from the road down the hill to the farm, but it is as steep as the old one.

"It's the same," I say, and most of it is. But the beehives are gone and the trees are old and the walk down the hill to the lake is impossibly shorter than the memory of it and the poison-ivy patch beside the railway track has been burnt out or poisoned. And they have put up a wire-mesh barricade on the old double-grooved trail beside the water to keep the campers out. The water is cool and greasy to the touch, and during the years all the small flat stones have been thrown away.

And at the top of the hill, below the road, is the graveyard. It was scrub and thistle 25 years ago and not like a graveyard at all. Once I met a man working there and asked him what he was doing, and he said, "Digging for oil," and I believed him. Now it is all clipped green lawn, lined with printed stones.

BINGHAM
In loving memory of

1880	Russell Sinclair	1963
1887	Vera Regina	

My grandmother lives in a retirement home now in Salmon Arm, three hours' drive away, and her youngest son, Charley, says that sometimes she doesn't remember. But she remembers. She approaches with cane and pet cat, sits carefully in a wicker chair, looks at me and says, "I thought *you'd* turn out handsomer."

Vera Regina Bingham, to the life.

"I never liked 'Regina,' and that's a fact. 'Vera' was always good enough for me. Well, isn't this nice."

The young cat slides across her ankle and goes off to hunt.

"Grannie, when I was a kid, the lake was always called Woods Lake. But they've got signs up now along there that call it Wood Lake. No s."

She looks at me again: "Woods Lake. Always. No doubt about it."

And tea and the evening darken. But as she leaves she hugs my girlfriend and says: "Are you going to be my new granddaughter?"

"Maybe. I don't know," my girlfriend replies, and I already know that this is our last trip anywhere together; in Toronto we have moved apart. But she hugs back and smiles at me over my grandmother's shoulder.

"Oh, she can be a Tarter," says my Uncle Charley that night. "Mother can be a Tarter, but they don't make them like that anymore."

I drive back to Oyama alone, in the rented station wagon, equipped to develop a reporter's view of my past: new spiral notebook, three ballpoint pens, and a list of names and places.

In the Farm Labour Pool, beside the Oyama Garage, a wash of voices, talking about the discouraging present. A lady who organizes harvesting crews for the farmers says:

"Too many developers around here, as far as I'm concerned. Well, the farmer isn't getting a fair price for his produce, so he has to subdivide. And the young people, they may go in for higher education, but when some of them come back, they're sort of at loose ends.

"No, no shortage of pickers, no shortage of bodies, shortage of willing workers, though. Our educational system develops a body that feels he is worth an X number of dollars, he feels he is worth five dollars an hour without training, but he's no farmer; he doesn't know how to thin, prune, graft; he's not qualified.

"When I was a kid in Vernon, everybody grew vegetables. There were beans, onions, tomatoes, all over; you didn't pay anything for them. Now we import all our vegetables. We overstock with foreign products before the domestic stocks are ready."

Bob P., now in his early 30s, who used to live below Middle Bench Road and still does, and who does not remember me, says: "Well, I've got three-and-a-half acres left, my Dad next door has less than that; we sold the rest. I'm allergic to the fruit sprays. I'm a salesman now. Plumbing and heating. The kids I knew, Tommy, Jackie, very few have gone into farming, but the generation after that, the younger brothers, are going back into farming for some reason . . . No, I don't miss it. The only time I think about farming is tax time. I hated it.

"Quite a few Kelowna people around here now are hobby farmers."

An old man lounging across the road from the Oyama packing house, where my grandmother worked sorting fruit from a black conveyor belt: "They're centralizing now. They've shut down the packing house here in Oyama and the one over in Woodsdale. They're going to shut down the one in Vernon. We just collect the fruit here now and ship it off to the new place in Winfield. They said they had a hard time getting help around here."

And a sign on a passing truck: "2, 4-D, not for me." It refers to the deep lakes of the valley, the Okanagan, Woods, Kalamalka, that are choked at

the edges by a new aquatic weed, Eurasian watermilfoil, *Myriophyllum spicatum*. It first appeared a decade ago, and now it grows in clots along the banks, sliming the beaches, fouling propellors, and yanking waterskiers off their feet. The British Columbia government has tested a chemical, 2,4-D, which stops milfoil in its beds, but the environmentalists don't care for chemicals, and there have been arguments in the taverns from one end of the valley to the other.

My girlfriend has flown off into the mountains to visit a friend who has found paradise in a town near the Alberta border, and I am left alone in the sad valley. It all seems changed, muddied, beyond saving. The old farmers die; the young farmers leave; the packing houses close; the lakes are soiled; there is a sense of drift and despair. The man from the city has lost a great deal of his country childhood.

But not entirely.

I lie on a wooden fruit-hauling cart in the quiet orchard, looking and listening and tasting, and the sensations begin to match the memories. The sprinklers chatter between the trees, and the cherries overhead look like black olives against the sun. There is wild rhubarb beside the toolshed, and I remember squatting in the strawberry garden, weeding and harvesting at the same time, and the taste of the juice comes back to me. A grasshopper crouches like a flat gray twig on the ground, and then springs into flight, its fanned wings black with a soldierly yellow trim. There is a drone from the highway across the lake and the sound of children a farm away and a smell of rubber tires, insecticide, and earth. In the crisp mid-afternoon light the farm is 25 years younger and full of life. My grandfather walks stiff-legged down the hill, the lengths of aluminum irrigation pipe balanced on his shoulders. My first dog chases round the chicken coop, delighted with the noise inside.

I'm 10. I pick a cherry, biting through the perfect smooth skin to the tart pulp, pushing the hard small stone to the front of my mouth, spitting it professionally two metres out into the orchard. Later I'll go swimming, now that I know how, and dry on the flat rock on the beach and listen to the lap of the water against the wood of the boathouse and dream of being grown up in the city. □

Fifty years of men and ideas

At Imperial, research is the mark of man

by Mark Nichols

This, in a sense, is where it all began. It is a single-storey building whose faded brickwork, making up a warm mosaic of pastel yellows, browns, and reds, suggests its origins are somewhere in the years just after World War I or perhaps earlier, around the turn of the century. The little building, now used for work on various flammable substances, is one of the oldest structures standing amid the orderly sprawl of Imperial Oil's Sarnia, Ont., refinery. Once — back in the days when horseless carriages were still noisy, ill-functioning contraptions — it was the refinery's "test house," where the plant chemist carried out routine checks on still-primitive refinery processes and products.

Today it is a distance of only 100 metres or so, but a quantum reach in terms of time and technology from the old test house to the three-storey, glass-fronted building that is part of the nucleus of Imperial's modern-day research department: the oldest and largest petroleum research centre in Canada and one that has earned for itself a world-wide reputation for excellence. Since it was officially born a little more than 50 years ago, the department has been awarded more than 350 Canadian and U.S. patents and pioneered an impressive list of refining processes and products that have been used around the globe. It is of no small significance that at the 10 World Petroleum congresses held between 1933 and 1979, Imperial has every time had a major research paper to present. That, as John Tiedje, the lanky, broad-shouldered native of Princeton, B.C., who is current manager of the research department, recently observed, is a record that "no other Canadian lab can match."

The white-coated men and women who work with Tiedje today — including some 90 scientists and nearly 200 laboratory technicians and technologists — are engaged in a myriad of projects assigned to the department's two main divisions. Henry Savage is responsible for process research and Warren Pattenden for products research. The work spans research into the development of longer-lasting lubricating oils and better gasolines, the upgrading of heavy western-Canadian crudes — a task allocated to the heavy crude group that is part of Savage's department — and reaches to the frontiers of energy technology, where scientists in the new energy group (another of Savage's responsibilities) are already looking ahead to the day when Earth's hydrocarbon reserves will not be sufficient to meet its present share of total energy demand.

Because of the work Sarnia's researchers do and the concentration of so many MScs and PhDs in one place, the atmosphere of the department is almost academic: scientists engrossed in the minutiae of their fields tend to leap up in mid-sentence to rapidly chalk diagrams on green blackboards, sketch molecular structures on handy notepads, or reach for pocket calculators to answer a question that has suddenly come to mind.

The names of just a few of the laboratories — thermal analysis, environmental protection, alternate energy — suggest the range and depth of the work. The department's operations division, managed by Manitoba-born Robert Kartzmark, maintains pilot plant facilities that are, in effect, a collection of miniature refinery units in which virtually every process and piece of refinery equipment is represented — and where tests are run on a round-the-clock basis. Elsewhere, in a row of sound-proofed test cells, automobile engines can be seen operating in apparently eerie silence, testing new types of gasolines and lubricants. Nearby is a somewhat sinister-looking "cold room," a huge iron box in which temperatures can be lowered to -40 degrees Celsius and from which, on a muggy summer's day, it is not unusual to see a technician, fully outfitted in Arctic gear, emerge after testing the cold-weather properties of a new Esso product.

In the research laboratories themselves, along with the traditional test tubes and retorts of chemists and chemical engineers, the tools employed by Sarnia's staff include such space-age exotica as an atomic absorption spectrophotometer, used to analyze trace metal elements in lube oils, a Carbon 13 nuclear magnetic resonance spectrometer, which can examine the structures of complex molecules, and a huge electron microscope that will deliver on-the-spot Polaroid snapshots as a scientist watches a specimen inside the machine at magnifications of up to 160 000 times larger than life.

It is all a far cry from the research department's beginnings a half-century ago, when petroleum refining techniques were just beginning to emerge from their infancy. What was set in motion then was a history of technological triumphs that, for the layman, seem to be recorded in a language as arcane as Sanskrit, bear-

Ron Cole

Horst Ehricht

Horst Ehricht

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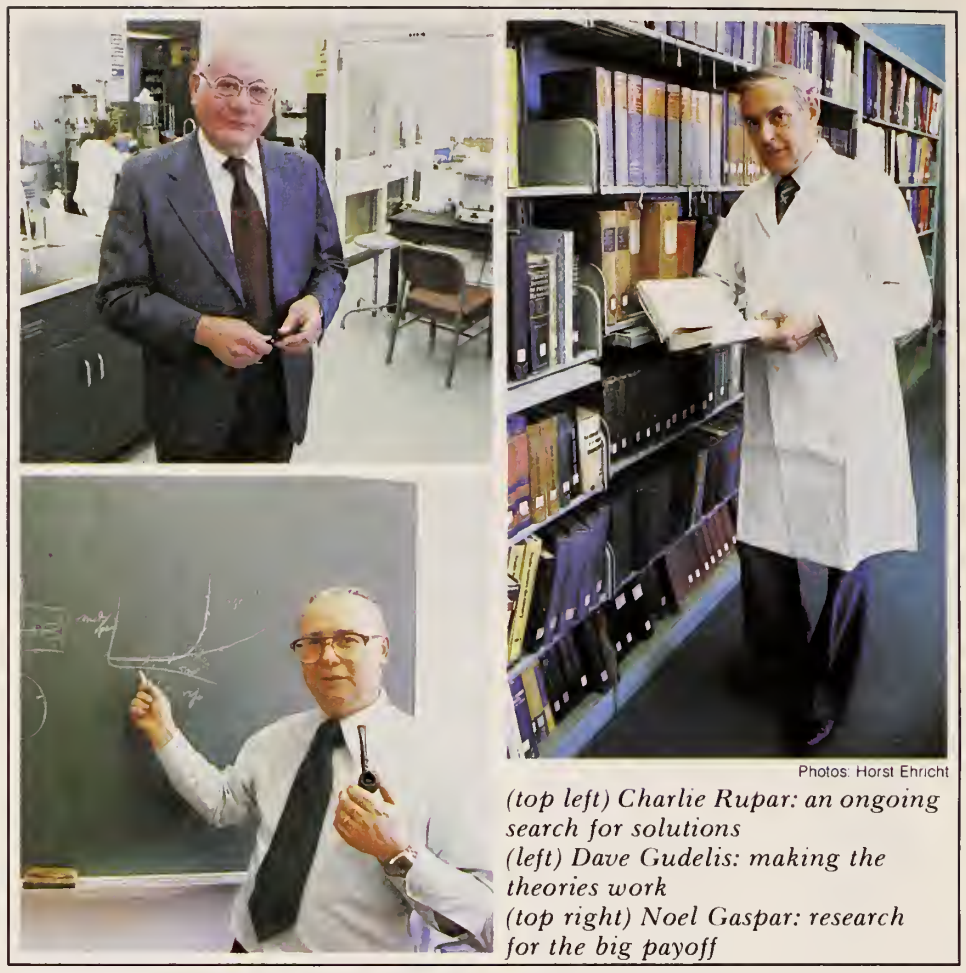
(top left) John Tiedje, manager of Imperial's research department where major expansion is coming
(top right) John Bichard: searching for tomorrow's energy today
(middle left) Cam Caesar: continued a pioneering tradition
(middle right) Robert Kartzmark: testing around the clock
(bottom left) Imperial's research laboratory has a history of technological achievement
(bottom right) R.K. Stratford: built from the ground up

illustrations by Huntley Brown

ing such bewildering titles as suspensoid catalytic cracking, mixed-feed steam cracking, DILCHILL dewaxing and deoiling, and EXOL N extraction. But it is a history made human by the minds and personalities of the scientists who led or served the department during the years, beginning with R.K. Stratford, the diminutive chemist, born in Brantford, Ont., who was to create the department, delineate its fields of specialization, and dominate it for 27 years.

A graduate of colleges and universities in Canada, the United States, and France, Stratford joined Imperial as the company's first research chemist in 1924 and within five years was head of the newly created technical and research division of Imperial Oil Refineries Limited in Sarnia. At first, according to a partial history compiled later by the department, Stratford was "for a long time left largely to his own devices." He proved to be a determined self-starter. Soon he had gained use of the old test house, taken over part of a floor in an old refinery building, begun building a staff, and launched a project that was to result in the department's first major achievement — a process known as phenol extraction.

In those days, recalls Oldrich Pokorny, the Czech-born chemist who was one of Stratford's earliest recruits, the Sarnia refinery, in the absence of any significant domestic petroleum source, relied largely on low-grade Colombian and Peruvian crudes, which were a poor basis for the production of the engine lubricants increasingly in demand as the automobile soared in popularity. Casting about for a solvent that would rid the South American oils of elements such as "polar" materials — including sulphur-based compounds — Stratford hit upon the idea of using phenol, a hydrocarbon derivative similar to carbolic acid. As it happened there was plenty of phenol around, since it was being used to produce an early petrochemical product called Bakelite, for which there was only a limited demand. Aided by Pokorny and another addition to his staff, H.H. (Herb) Moor, Stratford pressed ahead with the development of phenol extraction at the very time that Standard Oil Company (N.J.) was attempting to perfect an entirely different process. The Sarnia process won out, was put into commercial operation in 1930, and was subsequently used by about 40 percent of the world's refineries for processing lube oils.



Photos: Horst Ehricht

(top left) Charlie Rupar: an ongoing search for solutions
(left) Dave Gudelis: making the theories work
(top right) Noel Gaspar: research for the big payoff

Soon after the phenol extraction triumph Stratford's team faced a new problem. By now the growing availability of U.S. crude made it a better buy than the South American stock. But while the Colombian and Peruvian crudes at least had the merit of being low in wax content, the American oil now flowing north was waxy and posed new difficulties in processing lube-oil distillates. Stratford, aided once again by Pokorny and a young man named George Gurd, found the answer. Using a solvent called ketone — an organic chemical derived from hydrocarbons — they devised a method of heating the ketone and waxy oil in solution, then gradually chilling the mixture until the dewaxed oil separated out, leaving the chilled wax to be scraped away. The complex process eventually produced a wax slurry, consisting of wax crystals and some ketone, and a filtrate made up of dewaxed oil dissolved in a large quantity of ketone. Distillation was applied to both the slurry and the filtrate to separate out the oil and the ketone, which could then be reused.

With the perfection of the ketone process, first put to commercial use in 1938, Stratford's tiny group had set the stage for the department's future reputation in lube-oil processing and in the tricky task of dewaxing oil, a pattern of achievement that was to repeat itself during the years.

In the meantime Stratford, in the late 1930s, had begun to focus his abundant energies on a new objective, one that was to have far-reaching consequences, not only for the war effort soon to come, but for the Canadian petrochemical industry and for the city of Sarnia. Stratford's initial aim was simply to produce better, higher-octane gasolines for the fast-improving auto engines of the day. To do this he came up with one of the early improvements over the old thermal cracking process used to break larger hydrocarbon molecules down into smaller ones more suitable for processing as gasoline. His idea — one of the first versions of catalytic cracking — was to introduce into the thermal process a finely divided solid that would produce a higher yield of the desirable petroleum components. The catalyst selected was oil-soaked clay, a by-product of the method then used to decolor and remove impurities from lube oils. Fed into the cracking unit in the form of an oil-clay slurry, the catalyst remained suspended in the feedstock as it operated at high

temperatures and pressures.

This process, known as suspensoid cracking, not only worked, but also produced a valuable by-product: a plenitude of gaseous hydrocarbons, including butylene and butadiene. As it turned out these gases were among the essential ingredients needed as Ottawa looked for ways of producing synthetic rubber after Japan's World War II advance across southeast Asia cut off the supply of natural rubber badly needed by the Allies. As a result Imperial's Sarnia refinery, and a specially-formed company subsidiary — St. Clair Processing Corporation — became the core of the massive, joint government-industry effort that led in 1943 to the creation of the Crown-owned Polymer Corp. Ltd., one of North America's first synthetic rubber-producing operations and father of today's Polysar Ltd. The suspensoid cracking process was superseded as a refinery technique by the rival fluid-cracking process, but not before it had given birth to Canada's petrochemical industry. In 1939 Imperial was the only major company of any kind in Sarnia. Then in the early post-war years petroleum and chemical firms, including Dow Chemical of Canada Limited, Ethyl Corp. of Canada Ltd., Du Pont of Canada Ltd., and two other major petroleum companies — Canadian Oil Ltd. (which was to became Shell Canada Ltd.) and Sun Oil Company Ltd. — established themselves in Sarnia, creating the giant oil refining and petrochemical complex that now occupies the city's celebrated Chemical Valley.

Stratford was succeeded in 1951 by George Gurd, a big and intellectually creative man, who four years earlier had been appointed assistant director. Almost immediately, recalls one old-timer, there was a change of atmosphere in the department. Where in the earlier years Stratford had tended to supervise, personally and meticulously, every major project, Gurd, with a rapidly expanding staff carrying out a widening range of research, was forced, as were his successors, to perform an increasingly administrative role. But, recalls Pokorny, "Gurd was willing to gamble. He was willing to give a man a chance, to back him on the chance that his idea would work out." In other words Gurd, a native of London, Ont., who studied chemistry at the University of Western Ontario and at McGill University, was an enthusiastic supporter of exploratory as well as applied research. Whereas applied research is set in motion to meet a specific need and is expected to bring a short-term payoff, exploratory research begins with an idea that may come to nothing or may lead to a significant long-term return. During Gurd's 18 years as manager, the exploratory paths followed were to result in significant successes.

At first, however, the research department under Gurd followed up some of its earlier accomplishments with two more wax-related breakthroughs. By 1957 Imperial had developed the processes of wax hydrofining and wax recrystallization, the latter being a logical sequel to the development of ketone dewaxing, which, in the words of Lorne Sproule, a former manager of the lube processing research division, "left a lot of wax lying around." In the wax recrystallization process, the waxes were treated with a solvent, then slowly cooled until the various kinds of waxes could be drawn off. The technique, faster and more efficient than older processes, made available a new range of superior waxes that found widespread uses in industry as, for example, paper and cardboard-box coatings.

By now some new scientists had appeared on the scene in Sarnia, and a series of major developments lay ahead. One such man was Stefan Ilnyckyj, a hard-driving man who emerged from the wreckage of post-war Europe to play a part in a number of Sarnia's key breakthroughs. One was in the development of something called middle-distillate pour depressants: in layman's language, a method of preventing waxy Canadian oils used as diesel or home-heating fuels from solidifying in cold weather. One idea of how to tackle the problem, by employing an additive that would alter the crystalline structure of the wax so that oils would flow at low temperatures, was not new. But the theory had never been made to work before. Given the chronic problems of delivering fuels in the cold Canadian winter, Gurd thought it was worth trying again. Ilnyckyj, along with John Tiedje (who shares the patent for the process) and Charlie Rupar, a native of Brandon, Man., who is now research adviser in the department's fuels products division, did the trick. That consisted in isolating the correct portion of a resin needed to act as the right additive.

The result made possible the use of a wider range of crudes that could be used for producing diesel and heating fuels and was, notes Noel Gaspar, the English-born, University of New Brunswick-educated head of the research department's information services, "a classic example of a big payoff from exploratory research." Application of the process earned millions of dollars during the years in return for a relatively modest research outlay.

There are many men at Sarnia who have dedicated their careers to building the petroleum industry's version of the better mousetrap. One of the most inventive is Syd Greenwood, an expansive, jovial man, who has made his mark during the years by repeatedly hitting upon improved ways of cracking hydrocarbons to produce more of the gases needed to satisfy the voracious appetite of the petrochemical industry. Among the most significant of those was a process called mixed-feed steam cracking, which was put into commercial operation in 1960. Before then, explains Greenwood, now research adviser in the fuels process division's exploratory section, the steam-cracking process employed to produce gases, and in particular ethylene, had to be varied on a seasonal basis, depending on availability of feedstocks. When gas oils were not needed for home-heating fuels or naphthas for gasoline, they were utilized in steam cracking.

As Greenwood recalls, peering between the piles of books, reports, and papers that are crammed into every nook and cranny of his office, he foresaw the day when "the pieces would no longer fit," when eventually the process of switching from one process to another would become a problem. Accordingly, Greenwood proposed that the naphthas and gas oils could be cracked together, a suggestion roundly rejected by the conventional wisdom of the day. In the end Greenwood's idea was given a trial, with the results he expected. Not only did the system work but, in fact, "the presence of one element in the conversion process helped the other along," says Greenwood. "The conventional wisdom was just wrong."

The next important process developed at Sarnia, known as DILCHILL (for dilution chilling) dewaxing and deoiling, involved a number of scientists and in the end replaced the original ketone dewaxing process developed under Stratford. The idea first cropped up during construction of a new Edmonton lube-oil plant in the mid-1950s. Jim Livingstone, a young Toronto-born company engineer involved in the project (he's now president of Imperial) thought of the idea of chilling the dewaxing

solvent and mixing it directly into the oil feed to produce large wax crystals that could be removed more easily than by the messy and complicated scraping procedures involved in ketone dewaxing. "Dr. Pokorny said it wouldn't work," remembers John Tiedje, who had becomed involved. "But I, as a young greenhorn, thought I'd try it anyway."

The process did work, but was not ready in time for the Edmonton plant. DILCHILL dewaxing as a result lay dormant until a decade later when Sarnia took over world-wide responsibility for Exxon research into lube oil processing. DILCHILL dewaxing was revived and perfected. The original patent for the process is held jointly by Tiedje, Livingstone, and George Moreton, a chemical engineer from Windsor, Ont., who is now president of Esso Chemical Canada. A fourth man, Jack Walker, who later became the department's process research manager, was at one point instrumental in settling a crucial question about the DILCHILL dewaxing technique. When doubt was expressed as to whether the wax crystals would stand up to the violent agitation planned for them in the process, he settled the matter by testing the solvent and waxy oil mixture in an ordinary household blender. The wax crystals held up.

DILCHILL dewaxing, which is now spreading to Imperial's sister companies throughout the world, was first commercialized in 1970, a year after George Gurd's stewardship at the Sarnia research centre ended and a new manager, Cameron Caesar, took over. Under Caesar — a native of Guelph, Ont., known affectionately to his colleagues as "Cam" and described by one of them as "a shrewd type who, if you started to go astray, soon cottoned on and put you back on course" — the department continued to break new ground. Departmental research led by Warren Pattenden, the St. Thomas, Ont.-born chemist who is Sarnia's current products research manager, resulted in the discovery of a new and still secret ingredient that led in 1971 to the introduction of the Unirex family of all-purpose greases. In the meantime new developments in car engines in the late 1960s led to a search for a way of getting even more wax out of motor lube oils in order to achieve greater low-temperature fluidity. Jack Walker found the answer in a process called propylene-acetone dewaxing, which is a definite improvement over the older propane dewaxing process.

In 1973 Tiedje took over as manager, in time to preside, two years later, over a breakthrough that had long been waiting in the wings. In the late 1960s work had begun to find a process to replace phenol extraction. The reason was that, despite its usefulness as a solvent in treating lube oils, phenol is highly toxic and has always required great care in handling by refinery workers. By 1970 a team that included Jack Walker, Bruce Sankey, and Tony White had found a safer substitute, a chemical called N-methyl pyrrolidone (or NMP for short). The resulting process, dubbed EXOL N extraction, provided better yields more efficiently than the phenol process. The snag was that NMP was too expensive to make the process economical on a commercial basis. An ironic side effect of the 1973 Arab oil embargo changed that. As the price of oil shot up, so did the cost of phenol, a hydrocarbon derivative, while NMP was not affected. On top of that, the subsequent push to find less energy-intensive lube-oil processes helped EXOL N on its way. As a result some 60 percent of Exxon's lube extraction today is done by EXOL N, supplanting Stratford's breakthrough of a half-century earlier. The research cycle had come full circle. Recently, the Esso Petroleum Co. refinery in Fawley, Eng., where EXOL N was first commercialized, was given the Queen's Award to Industry in recognition of its introduction of this significant achievement in technology into the United Kingdom.

Though no one knows the exact day in 1928 on which the Imperial research department came into being, some 200 Sarnia staffers and annuitants gathered last Dec. 7 at the local Canterbury Inn to mark the 50th anniversary with a buffet dinner and conversation over drinks that continued late into the evening. Many of the men who helped build Sarnia's international reputation were there, including George Gurd, who now lives in vigorous retirement in London, Ont., spending much of his time helping his nephew run a grain farm at nearby Arva, and Lorne Sproule, who was born outside Sarnia 75 years ago and today lives quietly in the city with his wife, cultivating hothouse orchids as a hobby. Other prominent figures from the past were absent; Stratford died in England in 1959, and Cam Caesar, an avid yachtsman, still makes his home in Sarnia but spends much of each winter sailing in Caribbean waters. The outstanding work of other Sarnia alumni has taken them to research centres abroad: Stefan Ilnyckyj is now senior scientist with Exxon Chemical in Abingdon, Eng., while Jack Walker and Jack Pasternak are on loan as directors of research laboratories at Exxon's Linden, N.J., research centre.

Very much at the centre of the festivities was Oldrich Pokorny, still "Porky" to his many friends, despite the slight and agile frame he possesses at the age of 79. If ever a man can be called a legend in his own time, Pokorny, who cut the anniversary cake, can be. Almost a caricature of the eccentric and absent-minded professor, Pokorny cared so little for material things, legend has it, that he once offered to pay for a research project out of his own pocket when funds were in short supply during the Great Depression. A well-known figure, and something of a traffic hazard around Sarnia (where he still lives), Pokorny used to walk to work each day with a newspaper held firmly in front of his face, while pedestrians, cars, and other vehicles made way for him.

Entering its second half-century, Imperial's research department is facing new challenges and expanding to meet them as Imperial, like other oil companies, is faced increasingly with the problems involved in processing lower-grade crude oils, in seeking to make fuel and lubricating oils evermore energy efficient, and in looking ahead by examining the possible alternative energy sources of the future. Aided by a hiring campaign launched two years ago, the Sarnia department is expected to undergo a 30 percent overall staff increase by the end of this year, and is embarking on a $3.5 million building expansion that will upgrade laboratory facilities and provide space for an additional 60 staff members. The growth will affect nearly all the major areas of the research department. The expansion, notes Noel Gaspar, reflects "a general recognition of the vital importance of research to the future of the corporation and, I suppose, to some extent recognizes the past productivity of the Sarnia labs."

The rising tempo of activity at Sarnia is reflected in the growing cost of operating the research department. This year the department's budget leapt to $17 million over 1978's $13 million, of which roughly two-thirds was generated by Imperial itself, supplemented by some contract work for Ottawa and other outside interests. About one-third of the department's budget last year flowed from Exxon, drawn from U.S. and affiliated over-

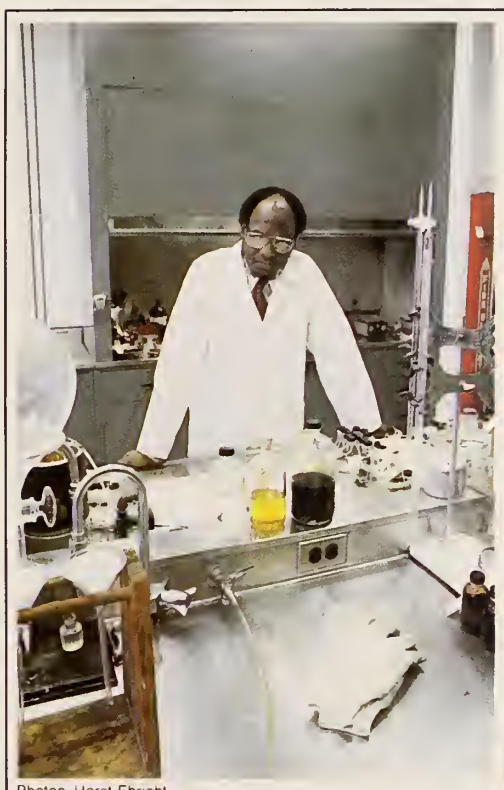
seas operations that benefit from Sarnia's lube-oil skills. Just as the budget has an international flavor, so does the research department's scientific staff, which by early 1979 included 46 native-born Canadians, 18 natives of the United Kingdom, as well as scientists from as far away as Egypt and India. Tom Wairegi, a handsome Kenyan-born chemical engineer who is a member of the heavy fuels group, is typical of the foreign talent that Sarnia attracts. "I have the brains and the education," says Wairegi, a graduate of British and Canadian universities. "But I don't have the experience. That's why working at Imperial is giving me such valuable experience."

Looking into the future Sarnia's senior scientists almost unanimously choose the same words to describe the major task that lies ahead: "Producing better products from poorer crudes." With the best-known sources of crude stocks for lubricating oils either depleting (as in the case of Venezuela) or being conserved (as in the case of Saudi Arabia), Dave Gudelis' lube process department is kept constantly on the go, testing crude samples from around the globe for their lube-oil potential. At one point last year, says Gudelis, a native of Lithuania who came to Canada when he was 17, so many of his staff — eight in all — were spread around the world on assignments requiring Sarnia's special know-how "that I used to walk through the labs and feel lonesome."

Similarly, in the interests of efficient energy use, Warren Pattenden's department is searching for ways of increasing the fuel economy capacity of motor oils. A team under Jack Eng, fuels process manager, is looking for the best means of upgrading the heavy crude from Imperial's Cold Lake, Alta., project. At the same time John Gilbert — who once led the way in discovering a new method of processing the "white" mineral oils used in cosmetics and medicines — heads an environmental protection group that is studying ways of purifying the vast amounts of water that will be used to bring Cold Lake crude to the surface and process it.

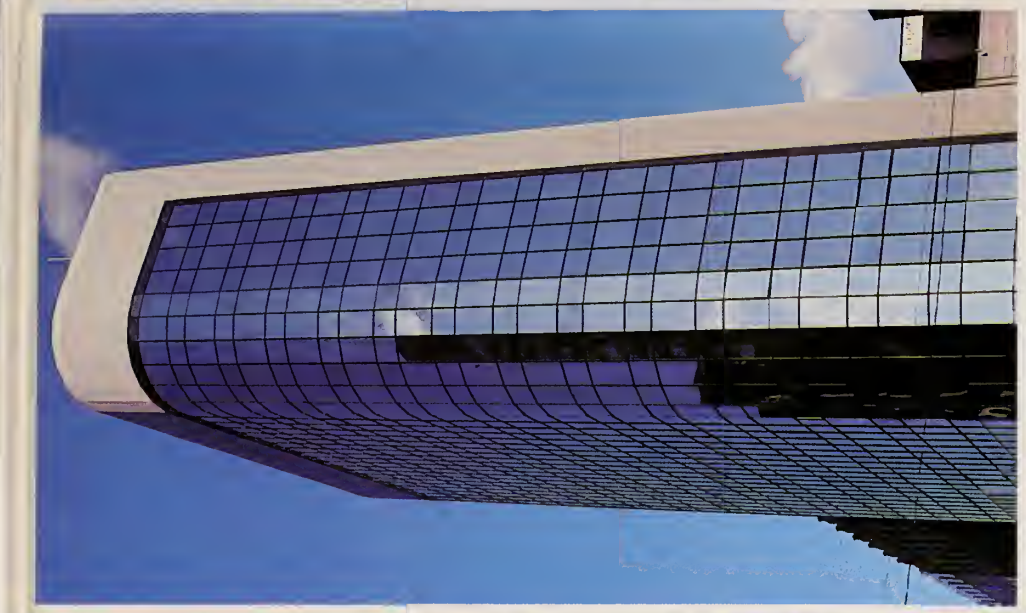
In the meantime John Bichard is, in scientists' jargon, "scoping the field" in an examination of possible alternate energy sources. Solar energy is at the top of his list, and already two solar collecting panels are in place on the roof of the main research-department building. Other possible future energy sources include geothermal heat drawn from the bowels of the earth and biomass energy: the systematic growth and harvesting of vegetation for conversion into fuel pellets or as the basis for energy-yielding gases. In the long run, though, Bichard believes that coal gasification may be the next major energy source and goes so far as to predict that by the year 2100, coal gasification and the development of alternate energy sources might well be the main business of the petroleum industry.

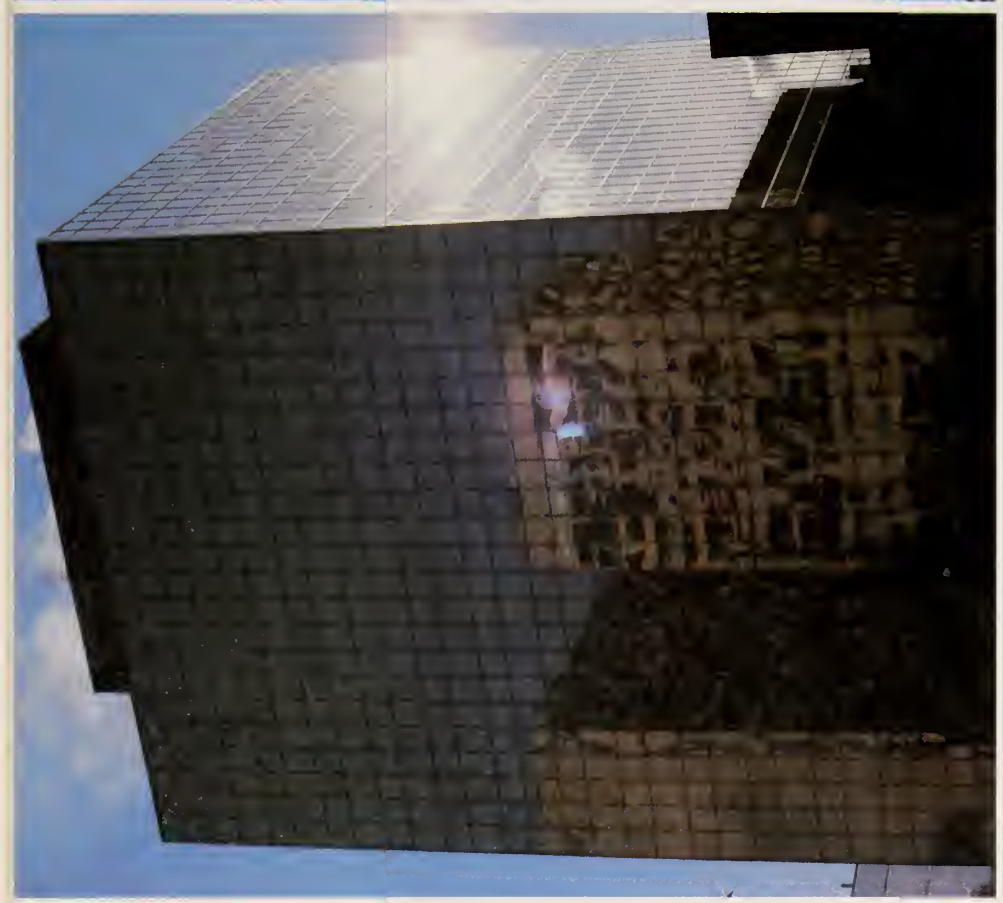
What are the distinctive intellectual qualities of research scientists who have accomplished so much in Sarnia in the past and must find solutions to the problems that lie ahead? It's simple, says Syd Greenwood: "You make some observations, then think about how you can get the greatest gain from them. Then one thing just leads to another." Lorne Sproule puts it differently. "Often getting the idea is 99 percent of the problem," he says. "Working it out is often the easiest part." Warren Pattenden perhaps sums it up best when he suggests that research involves all kinds of brains: "I suppose, after all, that neither Thomas Edison nor Albert Einstein could have done the other guy's job." John Tiedje, a usually taciturn man, is certain of one thing: "the need for innovative, creative people. Petroleum companies," he says, "may think they're marketing products, but they're not, they're marketing performance. The customer is concerned with energy to heat his home and move his car, as well as trouble-free service from all of his mechanical gadgets. The vital ingredient that provides the performance he expects is technology." And that is what Imperial's research department, with its remarkable record, is all about. □

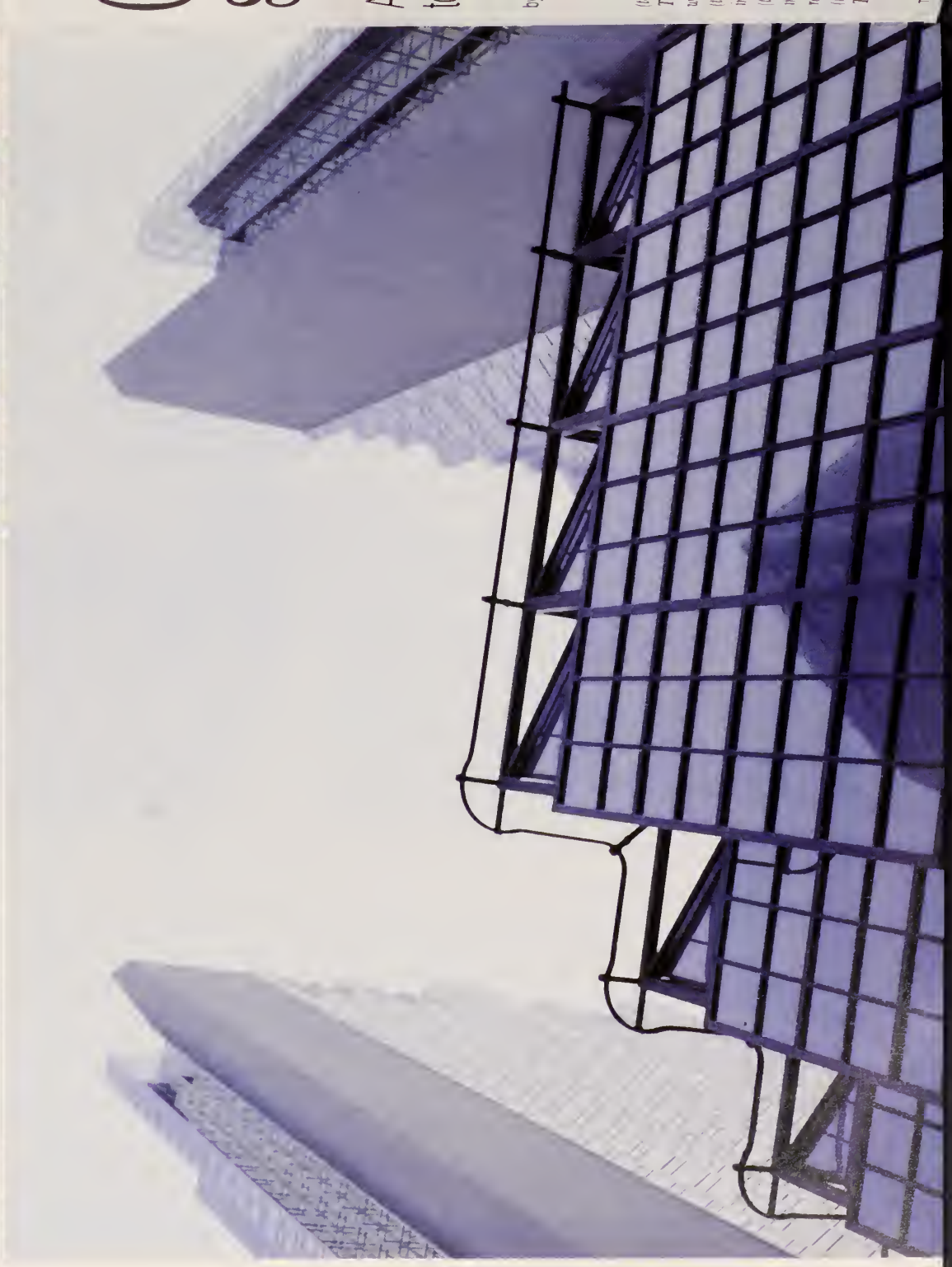


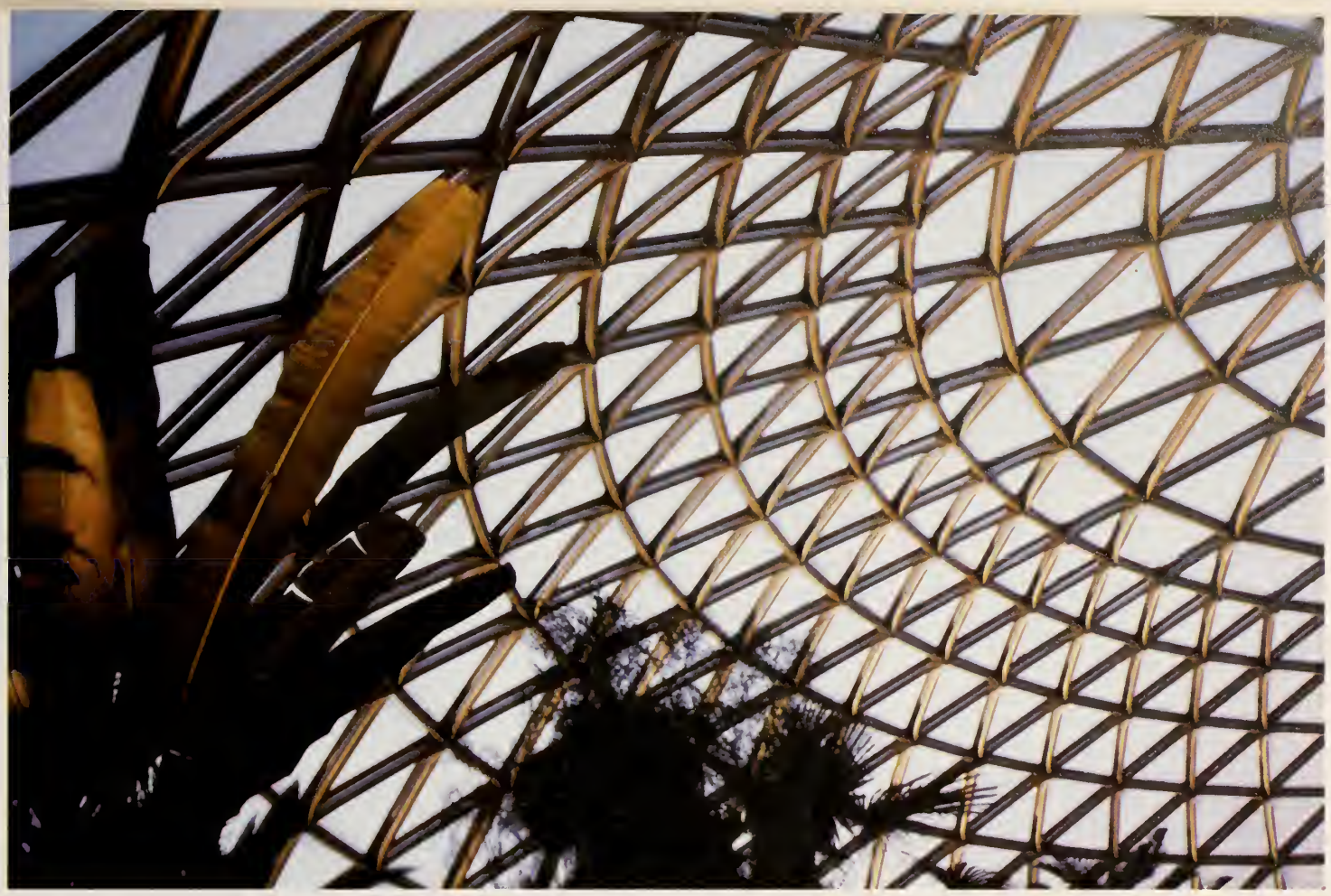
Photos Horst Ehricht

(top left) Tom Wairegi: gaining research experience
(top right) George Gurd: willing to take a chance
(right) Warren Pattenden: unlocking the secrets of energy efficiency









Cities of sunlight

A clear invitation to the view

by Val Clery/photos by Martin Bronstein

(top left) The Broadway Imperial Towers in Winnipeg: mixing glass with sun and clouds
(top middle) The Kensington Building in Winnipeg: stark simplicity
(top right) The Bloedel Conservatory in Vancouver: a celebration of a renaissance of glass and iron
(left) The Royal Bank Tower in Toronto: gold leaf in glass walls

> *Our pace of revolution is unprecedented in history. A single lifetime today brings more radical change than centuries created in Egypt, Greece, and Rome.*

That comment on American architecture by Bertrand Goldberg could just as well apply to what has occurred in Canada; indeed, measured against the range of development within our major cities in the past decade, it must sound like an understatement. Not only has revolution changed the scale and the function of new buildings, but also the materials used, with stone and concrete often displaced by metal and glass.

International fairs have always been powerfully influential in promoting new design and architecture, and Montreal's Expo '67 was no exception. Although Moshe Safdie's Habitat housing complex, constructed of precast concrete, was intended as its architectural showpiece, the show in fact was stolen by a U.S. engineer, R. Buckminster Fuller, with the enormous geodesic dome he built to envelop the United States' exhibit. Fuller's geodesic design was entirely original and persuasively demonstrated the vast possibilities opened by combining glass or plastic with new light alloys. But the basic idea of building with glass and metal was far from new.

Indeed, England's Great Exhibition of 1851 was entirely housed within the famous Crystal Palace, the first major structure in the world made of glass and iron. The technology developed later helped in constructing many of the great railroad stations of Europe, such market buildings as Les Halles in Paris and, most imaginatively, the Victor Emmanuel Galleria built in 1867 in Milan, which houses an entire shopping street and is still in use. Appropriately, the Galleria served as a model for a major structure in our renaissance of glass, Toronto's massive Eaton Centre, which is partly in use already and almost completed. Canada's extremes of climate, combined with the impact both of the automobile and of public transit, had long ago made the development of enclosed shopping centres both logical and inevitable.

Suburban Toronto's Yorkdale Plaza, an enclosed island of chain and department stores set in the middle of a vast parking lot, has served as prototype for many similar developments elsewhere. And Montreal's Place Ville Marie, offering a subterranean shopping complex in the heart of the city, has similarly been copied in other cities. But there is a hermetic and plainly functional quality about both developments that seems out of step with a new trend in architecture, sometimes labelled post-Modernism, that favors buildings that make visual statements and that are eclectic in borrowing from past styles.

The Hub, on the campus of Edmonton's University of Alberta, was Canada's first large-scale experiment in enclosing a community above ground in glass. A block long, it envelops not only small stores and restaurants but a pair of three-storey apartment blocks for students; as its name implies it was designed to serve both communal and utilitarian ends, and has done so very successfully. Edmonton also boasts the unique glass pyramids of The Muttart Conservatory and Horticultural Centre, which competes in innovative style with Vancouver's Bloedel Conservatory, a true offspring of Buckminster Fuller's dome, and again with Calgary's Devonian Gardens, an indoor Eden replete with streams, waterfalls, and a skating rink. Whatever their shape, all three share a distinguished ancestor, the Victorian conservatory.

Although the renaissance of glass construction had begun before the world was aware of an energy crisis, the role that glass can play in supplementing indoor light and heat will obviously ensure its continued extensive use. Technology has made entire walls of glass a simple proposition, and new varities of tinted and reflective glass have solved earlier problems caused by the intensity of sunlight.

In addition, the use of reflecting glass as a facing for high buildings does add a new aesthetic dimension to the urban landscape, catching the images of surrounding buildings, trees, clouds, and passing traffic; whether by accident or design, communities see themselves reflected in the companies or institutions such buildings house. The Royal Bank Plaza, one of a soaring group of bank head-office towers in downtown Toronto, has set itself off from its neighbours by incorporating gold leaf in the reflecting glass of its walls, a touch appropriate to its business that has been added

Coronation Pool: a palace of glass at the Ross Sheppard High School in Edmont

The Hub: a bold experiment in hot-house living in the heart of Edmonton

The Royal Bank Tower: reflecting in gold and glass an ever-changing world

The Bloedel Conservatory: adding aesthetic dimensions to an urban landscape

also to its Calgary office tower. The partly pyramidal Canadian Mint in Winnipeg, while eschewing such ostentation in favor of silver glass, manages to be almost as arresting by virtue of form alone.

Like any innovation these elegant glass palaces have attracted critics. Urban conservationists complain that too much of the historic texture of Canadian cities is being sacrificed for such vast developments and that the popular success, for instance, of the vast Eaton Centre will undermine the viability of humbler shopping areas in older buildings nearby, resulting either in decay or in more destructive development. Supporters of development point out, with some justification, that only some of the older buildings demolished are worth preserving and that often the clearances made for new development enhance the visibility of the buildings preserved. It may be some comfort to preservationists that, as a result of the current cycle of economic restraint, more and more architects are devoting themselves to the restoration of worthy older buildings and their adaptation to new functions. But as long as cities are thriving and growing, new development will continue.

It is pertinent here to recall a Taoist saying that one of the greatest of architects, Frank Lloyd Wright, inscribed on the wall of one of his creations: "The reality of the building does not consist in the roof and walls, but in the space within to be lived in." Charmed as we may be with the past, we must admit that cities were built as much for profit then as they are now and often with less concern for the well-being and delight of the people who lived and worked in them.

We are fortunate in Canada that our cities have not decayed and that for the most part life in them has not soured. We generally relish life in our cities and welcome every opportunity to share and witness its variety and excitement. While they shield us from our most formidable challenge (a harsh climate), translucent walls allow us at least the sense of being part of our city's life as we go about our business; when we can easily watch other people and see the changing sky and savor the contrasting textures of new and old, we are less likely to feel that city life is soulless and lonely. Glass buildings may not guarantee us a more open society, but they may reflect our wish for one. We should have reason to worry if opaque walls begin to shut us in again. □

The horse comes home

by Laird O'Brien/photos by David Street

You have only to watch my brother-in-law combing burrs out of Red's mane to know that something is up in the world of horses. My brother-in-law has a well-earned reputation as a man of science, an expert in computers and things mechanical. Yet here he is, the first-time owner of not one but *two* horses: a seven-year-old chestnut gelding named Red and an embarrassingly overweight pony.

Red, as my brother-in-law will sadly testify, is not your typical riding horse. For one thing, when somebody sits on his back, Red walks backwards but never forwards. He's been known to sneak up behind male visitors and bite them in the seat of the pants. And he kicks the pony regularly.

Now why would a sensible man — one who has never ridden in his life and whose children aren't at all keen on the idea — suddenly become emotionally and financially committed to such a loser? Even my brother-in-law isn't sure.

"Maybe it's the challenge," he says, ducking gingerly away from Red's back legs. "I've talked to a lot of people about Red, trying to figure out how to correct his bad habits. Everybody gives me different advice. I've read some books, too. People don't agree, but the books do."

In the equine world, one item is almost as plentiful as horses: books and magazines *about* horses. Literature is an industry in itself, aimed at everyone from the amateur with a problem horse like Red to the sophisticated breeder seeking advice on fertility potions.

Classic, for example, bills itself as "the magazine about horses and sport." A glance will tell you it is also about money. As well as the usual four-color spreads for Mercedes-Benz, diamonds, and fancy real estate, *Classic* has pages of ads for horse trailers, horse paintings, horse insurance, saddles, brass hunting horn candlesticks, riding schools, and even for bank loans to help one pursue any or all of the above. While most of the ads talk to those who have money, the photos and articles aren't so choosy; they appeal to anyone who has more than a passing interest in horses. Today that is a huge audience.

The horse, in his many colors and activities, has become something of a Canadian folk hero. Young Canadians are going to college and studying about the horse. Others are spending as much as $150 a month to board their animals. A few are even shelling out $100 000 or so for untried racehorses. When you reflect for a moment on the history of the horse, and particularly on its place in Canadian life during the last century, today's rush of popularity is certainly heady wine.

It surprises many to learn that the horse actually was born and came of age in North America — not in Europe or Asia — and then wandered off to see the world. When Cortés and his conquistadors splashed ashore in Mexico on Spanish mounts in 1519, the horse had *returned* home.

How did this wondrous journey come about? Did Pegasus, the winged horse of mythology, actually exist and did his kind fly the oceans? No. Just as

prehistoric man used the bridge of the Bering Strait to come to America from Asia, so the horse left by the same route.

About 60 million years ago, just at the time when Eohippus, the dawn horse, had developed into something that we would recognize as a horse, the Bering land bridge appeared. Many of the herds spread into Asia and then into Africa and Europe. The herds that stayed in America died out completely about 8 000 years ago; they survived the ice ages, then perished for no apparent reason. So when Cortés landed, a great circle of life was completed, and with the help of Indians and white settlers the horse spread throughout North America during the days of colonization.

Those original horses that swept across the Bering land bridge into Asia carried hereditary surprises and strengths beneath their scarred hides. Unusual characteristics popped up on the surface, too, such as the dappled pattern on the necks and rumps of certain wild wanderers. Prehistoric cave artists portrayed horses with such markings. Thousands of years later, in the New World, Nez Percé Indians fancied the same distinctive spots. They believed the horses that bore them possessed remarkable agility and stamina.

The Indians bred the speckled steeds and helped to establish a line that concentrated and refined these traits. We know the breed today as the Appaloosa, a name that comes from the Palouse River region of Idaho, land of the Nez Percé.

The efforts of these Indian horsemen echo the experiences of breeders down through the centuries who have worked to shape the world's recognized breeds. Theirs is a labor of patience and love. In the case of the famed Arabian breed, the entire process required thousands of years, from ancient Egyptian times down to the present day.

In decades past, Canadian and American stockmen have worked painstakingly to create a number of well-known breeds. The Morgan is considered the oldest North American breed — a stylish, compact horse incorporating Thoroughbred and Arabian bloodlines. The Appaloosa is prized for its spotted coat. The Tennessee Walking Horse is named for its home and for its unusual gait, an elegant running walk. The Standardbred, known as the peacock of horses, is bred primarily for harness racing. The American Saddle Horse is a showy animal with great vigor and a smooth gait. The Quarter Horse developed from English Thoroughbred stock in colonial times to run a quarter-mile race faster than any horse alive.

Most breeds in North America stem from European, Arabian, or Asian bloodlines. The great draft horses that plodded the Canadian fields in the late 1800s carried the blood of knightly war horses from Europe's age of chivalry. When the invention of gunpowder put an end to jousts, castles, and sword-play, the chargers had to find other employment. Though bred for battle they were superbly suited to heavy farm work. This new career, however, was short-lived.

The arrival of the gasoline engine brought automobiles, trucks, tractors, and a gleam to the eye of farmers. In those days of cheap and plentiful energy, farmers welcomed the idea of machines that needed to be "fed" only when they worked. Even the sports with showy trotters and buggies gradually succumbed to the automobile's charms.

As late as the 1920s there were 800 000 horses in Canada. By the 1960s the number had dipped to 100 000, most of them pleasure horses. Now suddenly the trend has reversed. Ironically the surge of technological progress that wiped out the horse's working role is largely responsible for today's leisure hours and the horse revival.

Old-fashioned horseback riding is booming from British Columbia to Newfoundland. In Ontario alone there are now more than 250 000 privately owned riding horses. Every large city is

ringed by a network of fancy stables, converted cow barns, and drafty sheds. They all advertise themselves as "boarding stables," and some entice a stream of unwary owners to part with $100 or $150 a month for questionable care of their horses.

Why are so many so fascinated with horses these days? A few are in it for the money, of course; every fad and fancy attracts its merchants. Most, however, are city people. As our cities become more plastic and chrome, as our lives become more regimented by numbers and computers, contact with the pungent world of earth and living things — so much a part of our recent past — becomes a need for many.

Relaxation. Renewal. A change of pace. And as one doctor who raises Hackney ponies tells his tension-wracked patients: "There's something about the outside of a horse that's good for the inside of a man."

There is also a very human reason for the horse's current popularity. Riding around a dusty ring or plodding across somebody's pasture has given way to well-organized *social* events. Trail rides, camping expeditions, family outings, association parties, and the like. Each breed promotes, indeed worships, its own identity. For many the talk and the rivalry and the good fellowship are almost as appealing as the horses themselves.

For one group, however, the thrill is simply to be sitting on a horse's back. *Any* horse! These are the handicapped, adults and children, for whom riding is both recreation and therapy.

At Ashmount Farm, north of Toronto, a wide-eyed girl of about nine is gently lifted off a horse named Ben after her first ride. As mother helps her into the wheel chair, she looks up and shrieks with delight.

"Now I know what it feels like to walk," she says happily. "When Ben walks, I walk."

Bringing horses and the handicapped together isn't a new idea. The practice has been going on for many years in parts of Europe. In 1968 a Canadian organization was formed called The Community Association for Riding for the Disabled. Riders are adults and children who have been disabled by accident or disease. They include victims of cerebral palsy, poliomyelitis, and arthritis. Some are handicapped by strokes, blindness, back troubles, or autism.

The emphasis used to be on reaching some therapeutic goal: sensing the motion and rhythm of walking, for example, or strengthening weak muscles. Lately the recreational side has become more important. Having fun and forgetting a disability, if only for a few minutes, are reasons enough to ride.

Even down on the farm the horse may have the last laugh. As energy costs soar, big machines are losing some of their glitter. When a tractor costs $20 000, the vision of two gentle Clydesdales or Percherons munching hay in the barn can be an appealing alternative.

Of course, all those fugitives from the city and part-time farmers who make up the back-to-the-land movement hold the draft horse in high regard, right up there with windmills and solar-energy panels. After all, the horse is a *natural* approach to saving energy, avoiding pollution, obtaining free fertilizer, and having somebody to talk to as you plough the fields. All of which helps to explain the large crowd lining the ring at a recent auction of draft horses. One leathery farmer in his sixties shook his head in amazement as a Belgian mare was sold for $5 300.

"My Dad won't believe this," he chuckled. "He's 94, and when I get back to the farm and tell him they're selling breeding mares for better than $5 000, why he'll up and throw his cane at me."

As more and more farmers swing back to horses, a mare that will produce seven or eight foals in her lifetime is a pretty good investment. Worth pampering. The picture, however, isn't nearly so rosy for others.

Down through the years man has not always been kind to Canada's roaming bands of wild horses. Many have been rounded up and broken to saddle or

shot, because they were destroying grazing land.

It was Norma Bearcroft of Richmond, B.C., who set out to rescue them. In 1965 she founded the Canadian Wild Horse Society, a nonprofit, charitable organization dedicated to "the protection and preservation of wild horses and fighting cruelty to all equines." The society's approach to wild horses is a simple one: *leave them alone*.

Fifty years ago there were perhaps 100 000 wild horses in Canada. These battle-scarred stallions and their harems of mares were far from beautiful, but in their veins flowed the blood of magnificent Barbs brought to Spain by the Moors. Today the old nobility struggles for survival. We have only about 4 000 wild horses left — 1 000 in British Columbia, 2 000 in Alberta, uncounted bands in Saskatchewan and, perhaps, a few hundred on Sable Island off the coast of Nova Scotia. With public support, good management, and a little bit of luck, this population, too, may soon be on the upswing.

Just as publicity has focussed attention on the plight of our wild horses, so has it glamorized the joys and rewards of winning. Two racehorses and a jockey — Secretariat, Seattle Slew, and Steve Cauthen — have galloped across North American newspapers and television screens. There's no way of knowing to what extent their personal accomplishments have stimulated newcomers — Karen and Mickey Taylor were first-time owners when they bought Seattle Slew — to venture into the high-risk world of Thoroughbred and Standardbred racing. In any case the market for untried yearlings is becoming a crowded one.

The *average* price paid at a recent Kentucky sale of yearlings was $86 000. Naturally such rewards have stimulated the breeding industry. While Canadian prices are somewhat lower, we're earning such a reputation for our horses that a breeder of Standardbreds from Strathroy, Ont., was able to take a yearling to a sale in Harrisburg, Pa., recently and come home with $310 000.

The lure of competition isn't confined to the racetracks. All the major breeds promote their own competitions, prizes, and status symbols. Even the huge draft horses have climbed on the bandwagon.

Each year, in the dead of winter, men and their teams from all over eastern North America gather in Toronto for the annual horse-pulling contest, sponsored by the Ontario Belgian Horse Association. The quiet giants that have been skidding logs, pulling ploughs, moving stone boats, and hauling vats of maple syrup, suddenly find themselves centre stage.

In a horse-pulling contest, teams of purebred Belgians, Percherons, Clydesdales, and their crosses are hitched to a steel drag or sledge that is loaded with concrete blocks. A process of elimination determines the winner: the team pulling the heaviest load the farthest distance.

While the contest may lack some of the glamor of the racetrack or the show ring, it offers proof that horse fever can strike in the most unlikely ways.

Malcolm McGillivray is a 64-year-old logger from Bancroft, Ont., and a winner at the 1978 contest. Reflecting on the sport and his travels from contest to contest with his team of Bob, an eight-year-old Belgian, and Charlie, a Belgian-Percheron cross, McGillivray admits, "It's like alcohol. It gets into your blood."

Whatever the lure of horses — competitive thrills, dreams of owning a champion, or just a relaxing way to fill up those leisure hours — it's obvious that a great many of us are behind the horse these days. And pushing! Clubs, breeding associations, commercial riding stables, publishers, and even the farmers who board horses for city people are all working to expand the interest. "Snobbism is undoubtedly a factor," one riding instructor adds, "but ultimately it's the love of the animal that eclipses other motives."

Besides, there may be a conspiracy among some parents. Most adults heartily approve when their youngsters participate in today's wholesome approach to horsing around. □

It's time we all began to spread the economic word

by Dian Cohen

A generation ago James Thurber and E.B. White asked, "Is sex necessary?" Masters and Johnson have answered, "Nonsex is a form of sex."

So, you might be tempted to ask, what has this to do with economics and economic education? Everything.

There is not much any of us can do in our everyday actions that doesn't in some way touch on economics. To ignore it is to ignore the major part of our time, energy, and creativity that goes into earning our livelihood. Take an average preschooler. Her life takes place in a hive of economic activity. She goes to the bank with her mother to get money. She goes to the store with her to spend it. She sees her father or mother, or both, going off to work every day. She hears her parents complaining about taxes or rising prices or a general lack of money. She is denied a coveted toy, because "it costs too much"; her parents can't "afford it." She receives a weekly allowance and is told not to spend it all in one day.

Many of the daily problems and issues that confront us as adults and as producers or consumers of goods and services are economic in nature. How much economic growth is desirable and necessary? Can we protect the environment without damaging the economy? Is it possible to contain inflation without causing a recession? What is the right level for the value of our dollar? In order to be able to take an intelligent stand on these issues, some of which may literally be a matter of life or death, we must have a basic understanding of economics.

That more and more Canadians realize this, is apparent from the growing enrollment in both academic and adult education courses in economics, money management, and business. Across the country such courses are proliferating in response to the demand for them.

Despite widespread interest in economic issues, there is something about the way a great deal of economics is being communicated that is ineffective. For example, when the Anti-Inflation Board was set up more than three years ago, part of its mandate was defined in educational terms. It was supposed to promote an understanding of the inflationary process and the overall difficulties on the

economic scene. And, indeed, the AIB produced a great deal of publicity and explanation.

To find out how successful it was, and with whom, the AIB instigated a Gallup Poll study in 1978 to test the level of awareness, concern, and understanding that we, the public, have about inflation, the AIB programs, and economic cause and effect generally.

In answer to the general questions, a very high proportion of the respondents — as much as 91 percent — thought that it is "very important" to understand the causes of inflation and other economic issues.

But then the Gallup Poll sought to discover what we think of our *own* understanding of economic terms.

The results were revealing. When asked the meaning of "monetary policy," only 24 percent of the population were able to give a clear definition. Fifty-nine percent were vague, and a full 17 percent had no knowledge of what it means. The term "depreciating currency" isn't fully understood, either. Forty percent of the population is vague about its meaning, and nine percent just doesn't know what it means. The poll also asked about such terms as "deficit financing," "stimulate the economy," and "consumer price index." The results suggest that people are vague in their understanding of economic terms and when asked, they indicated that they *want* more education and information on them.

So here we have a clear picture. The public is anxious to learn and understand economics. Governments, business columnists, editorial writers, university and adult-education teachers are just as anxious to communicate that information. There appear to be two stumbling blocks. The public lacks some of the fundamental terms and concepts of economics. The communicators are only beginning to come to grips with this fact.

It has not gone totally unnoticed that our educational system has been slow to respond to the pressing need for better and earlier training in basic economics.

In 1974, under the prodding of financial expert Harvey Perry, the Canadian Foundation for Economic Education was set up, with the sole objective of increasing the general understanding of economic matters, both nationally and on an individual level. The avenue the CFEE has chosen to accomplish its task is by economics instruction in Canadian schools.

Harvey Perry has been a familiar figure on the Canadian financial scene for 25 years. He was widely known as the executive director of the Canadian Bankers' Association. His passion has always been "to understand . . . to put light on some dark areas." To that end he worked tirelessly until he got sufficient support to help launch the Canadian Foundation for Economic Education.

A large part of that support has come from the business community. "Three hundred corporations have consistently provided us with $300 000 a year," says executive director Libby Joyce. "And for that we are tremendously indebted." "But," says president Harvey Perry, "if we are to continue to develop . . . we've got to add to the list."

Imperial Oil has contributed $15 000 a year for the past four years, reports Dick LeSueur, head of Imperial's contributions department. "We feel that everyone leaving school should have some knowledge of how business is transacted, what is involved in obtaining a loan, and what the marketplace is all about. Just to live requires a certain amount of economic understanding. Every day we're all involved in cash transactions."

Ronald Willoughby, manager of Imperial's advertising department, concurs. "There is a need for economic education. Young people are no more or no less economically knowledgeable than they used to be. But the world has gotten very complex and so our need for more sophisticated economic understanding has grown."

Willoughby has both praise and reservations about the CFEE.

"There is no doubt about the importance of economic education. But people should be helped to make up their own minds and understand the implications of their actions. If they're asked to sign a petition about whether a high-rise should be built, what are the issues involved? If they're asked their position on certain kinds of investment,

"All we want to do is improve the

their answer can have a profound influence on the economy. There is no right or wrong. These issues should be discussed in the schools, and people will undoubtedly be better citizens if they have more information. That's what the CFEE is trying to do: present the materials in an objective and nonpartisan way.

"The CFEE is traveling a really tough road. It's got to produce material in a noncontroversial way so it won't offend business, labor, or government. The result is often bland and pedantic. But it's getting better."

Libby Joyce feels that problem keenly. "Credibility is a very fragile thing," she says. "We're supported primarily by business, and all we all want to do is see economics taught better in the school system. As we find out more about what our role should be, we'll come out with more material. But we can't take a strong stand on issues. That's not what we're here for."

Today, while it is still in its infancy, the foundation can claim some successes in spreading the economic word. Equally important is what it has discovered about how economics teachers and students perceive the subject and how it should be taught.

Joyce says she's learned a lot since her early days as an economist at the foundation. "In the beginning," she says, "our activities were designed specifically for teachers and students. It seemed to us that our first responsibility was to develop high-quality, current, issues-oriented material for senior high-school economics courses. They were high on our target list because senior-high students would be leaving school soon. We thought there'd be more time later to reach the younger kids."

In 1976 CFEE began its *Understanding Economics* series. So far, the foundation has produced six pamphlets: on unemployment, productivity, urban development, international trade, agriculture, and immigration. Another series, *Government and the Economy*, is designed to give high-school teachers some background information on different aspects of government involvement in the economy. For example, one booklet describes stabilization policies, another discusses the anatomy of the tax system.

"All we want to do," says Joyce, "is improve the economic literacy in the country. Take, for example, the last interest rate increase. The guy on the street knows the economy is sick, because of the level of unemployment. He also knows that if he buys a car, people who make cars will have jobs. Then the interest rate goes up. He can't afford to buy a car on time. What does it all mean?

"What we want to do is provide teachers and students with the answers," Joyce says.

To that end, the CFEE has embarked on two other publications. One is a magazine for teachers, called *Economics in Canadian Schools*. "We've met many teachers whose enthusiasm, innovativeness, and professionalism deserve to be recognized and whose talents in getting economic ideas across can help their colleagues. The new magazine is how we intend to do it," says Joyce.

The other is an "instant print" series. "We get permission from newspaper editors and writers across the country and put out collections of topical articles on one particular subject," Joyce says. "This 'instant print' can go straight into the classroom for discussion."

Finally, after three years in the making, the foundation has launched a powerful tool for turning teachers on to economics. *TRADE-OFFS* is a film series for teaching economics to students ranging in age from 9 to 13, and is available for use in British Columbia, Alberta, Ontario, and in English-language schools in Quebec. Plans are under way to adapt the *TRADE-OFFS* concept for a French-language audience.

Despite the ubiquitous activities of the CFEE during the past four years, economic education in Canada still has a long way to go. There are only a handful of courses designed to develop teacher-training skills, and in no

ne economic literacy in the country."

province is economics compulsory at the high-school level.

The first breakthrough in this regard has occurred in Quebec. La Fondation québecoise d'éducation économique, that province's arm of the CFEE, prepared a brief in response to the Quebec government's 1977 green paper on education. The government subsequently announced that economics would, in the near future, become a mandatory course at the high-school level in Quebec.

In other provinces where economics has been introduced into schools, even on a voluntary basis, it has been demonstrated that ordinary teachers can teach basic economic principles to ordinary children with excellent results.

It's not difficult to understand why. Students like economics because it is important and it is real. And because, properly taught, it can be readily related to their every day lives. Remember the preschooler we talked about earlier? By high school she has become even more aware of the economic realities facing her. She knows that soon she will have to decide on a career if she wants to become economically independent.

She realizes that many of the things she wants for herself cost money and that money isn't always the easiest thing in the world to obtain. If she looks for a summer job and can't find one, she becomes aware that there are economic forces swirling around her that have a direct impact on her personal life and future.

Students at all levels, but particularly at the high-school level, are receptive to the study of economics, because it helps them to understand the nature of some of these forces with which they will very soon have to contend. It also helps them to see that they have a part to play in the real world; that they are potential "producers" as well as the consumers they have been since birth; and that they have valuable services to perform in society.

In the final analysis the effectiveness of government depends on the capabilities and the knowledgeability of the people. For it is the people — you and me — who, through our votes and other influences, determine the scope and nature of government policies, including economic policies.

If the citizens of this or any other country are to exercise their great political power responsibly and effectively, more people must know more about how our economy works. We must have the information that will allow us to think about economic issues objectively and rationally. If not, important decisions affecting the well-being of the nation will be made, as unfortunately they often *are* made, on the basis of ignorance and prejudice.

Harvey Perry, a founding father of the CFEE gets the last word. In the foundation's fourth annual report, Perry writes: "Unhappily, widespread knowledge doesn't guarantee that all would be well with the economy. There is still a great deal that we do not know about economic phenomena ... and it is an imperfect world in which we live. At the same time, we have never had the experience of a broad comprehension of economic matters, and the results could be dramatic. It is clear, for example, that the whole of modern mass transportation has depended on the ability of millions of ordinary people to learn to drive a motor vehicle. At one time this might have seemed impossible." □

The beckoning past

Some help in climbing the family tree

by James McGivern/illustrations by Eric Nasmith

The brig *Hero*, Capt. William Heard, commander, made a very stormy crossing from Cork, Ire., to Saint John, N.B., in 1834, and the Irish emigrant passengers suffered accordingly. Twenty-four-year-old Richard Pattison McGivern wrote in his diary: "May 31st about 4:30 o'clock in the morning the gale was so high that the captain considered it unsafe to run any longer for fear of shipping any of the seas that were running mountains high and which might be attended with very fatal consequences. We lay to until about 6 o'clock Sunday morning, 1st June, when it became moderate — wind north. This evening I was taken very ill of dysentery and obliged to take to my bed where I had to remain until Friday the 6th."

Richard's Atlantic voyage may be of slight interest to the world at large — many thousands like him had a similar experience — but it interests *me* for he was my great-grandfather, the first of my father's family to reach the New World. If he had not made it I might not have been born in Canada. Indeed, I might not have been born at all. To the McGiverns, and those Savarys, Snyders, Campbells, MacDonalds, Taylors, and Chisholms who are linked to them, the voyage of the *Hero* was a notable event in family history; just as the fall of a tree on a Cape Breton farm in 1802 was a significant tragedy, because it killed a pioneer Chisholm.

Obviously some family histories are intrinsically more interesting than others, just as the lives of kings, martyrs, and prominent villains are more exciting than those of farmers. But every family history, no matter how quiet and apparently uneventful,

is fascinating to the members of that family. And the search for one's ancestors is one of the most exciting quests anyone can embark upon. It is high adventure.

Genealogy was long considered to be a dull recitation of names and dates, as boring as a Victorian history textbook or those passages in the Bible that list, interminably, who begat whom. Yet it is now the third most popular hobby in North America, after stamp and coin collecting. You can't buy or trade ancestors, but they're much more fun than stamps.

Ancestor collecting got its big boost from *Roots*, Alex Haley's best-selling history of his own, fairly typical black family. The first television series based on the book gained a record audience and caused a 70 percent increase in requests for genealogical information from the National Archives in Washington, D.C. Haley penetrated what sociologist Wyatt Tee Walker called the "cultural blackout" shrouding the history of slave families. His story started millions of black Americans thinking about their own roots. Surprisingly, millions of whites did the same. Haley wrote: "In all of us there is a hunger, marrow-deep, to know about our heritage — to know who we are and where we have come from. Without this enriching knowledge there is a hollow yearning. No matter what our attainment in life there is still a vacuum, an emptiness and the most disquieting loneliness."

Roots is genealogy at its best, not just a list of names, but portrayals of the captured African Kunta Kinte and his descendants as feeling, breathing people, set against the background of their times. Haley took some of this background from the accounts of others, which is perfectly permissible in a family history. We want to know, not just who our ancestors were, but how they lived, and if they have omitted to tell us in their own letters or diaries we are entitled to look elsewhere.

Every North American family not of pure native stock has a Kunta Kinte, an original immigrant, somewhere in its past. He may have arrived many generations past or only a few years ago. Mine is Richard, the lad from County Cork, who sailed, not in chains, but in fare-paying discomfort with testimonials in his pocket recommending him for "any situation either in the mercantile or any other department of trade." They didn't help much. After trying his luck in New York he settled in Saint John, N.B., and did quite well in the shipping business. He chose this country and made it his. While I am proud that my ancestors came here a long time ago, I regret that some of this sense of choosing has been lost to those of us who are born here. So it is important for us to realize our roots, not just in Canada, but in the old lands and to understand why the original immigrants came here and the traditions they brought with them.

I began compiling my family history in the late 1950s after a 12-year-old nephew came home from Upper Canada College in Toronto and wanted to know what has our family done to help make Canada? His class had been told to bring stories of their families and their achievements. I assured him that his family had done a great deal. Then I said to myself: I know this, but I can't prove it. To convince the boy, I should have something written down.

I began late, having turned 50. Although I have since completed five volumes, the job would have been much easier if I had started earlier in life. Memories fade and people die. I wrote to my father, asking him what he knew about the family and received five pages of notes containing, as I later discovered, an error on each page. Fortunately I had some aged relatives still alive and with good memories — a great-aunt, who lived to be 93, provided the story of her quiet but important life — and old family journals and a goodly number of documents had been preserved.

The bare bones of a family history is the pedigree chart or family tree. The old form, favored by professional genealogists in England, begins with an important ancestor and traces his descendants in ever-widening lines down to the present time. The more popular and practical way is to start with the present generation — meaning you — and work backward in time. Later, your children and grandchildren can carry the story forward, for the foundation will have been laid. So begin your chart with your own names

as number one, leaving two spaces for your parents, four for your grandparents, eight for great-grandparents, 16 for the generation before that, and so on. Once you have the names of your relations, plus dates of births and deaths and lists of children, you go on to the details you can find of their lives, occupations, achievements, and clues to their personalities.

The ideal time to start is on your wedding day. You're young, presumably, and you know your own story and that of your spouse. (If you don't know his or her story you can soon learn it).There will be parents at the wedding, possibly grandparents, aunts, uncles, and distant cousins you might never meet again. I'm not suggesting you let the champagne go flat while you whip out a tape recorder and interview them on the spot. Just remember where they can be contacted later, for their stories should provide the basic record of four generations of family history. The parents will remember their parents and so will the grandparents. Allowing 25 to 30 years per generation, that's more than a century of family life. There are recently-titled families in Britain who cannot trace their ancestry any farther than that. This basic story can be written without delving into ancient records or scraping moss off tombstones. You may wish to stop there, but chances are you won't. For the fascination of ancestor hunting soon takes hold and leads you into the real detective work, probing back beyond living memories and hunting for long-hidden clues. Many of these are to be found in attics and basements. The average Canadian family moves house fairly frequently and, while attic treasures get lost or thrown out, there is still genealogical gold to be found in old trunks and boxes.

The old family Bible, with its list of births, marriages, and deaths carefully inscribed on the flyleaf, is a prime source of information, although the names and dates should be checked, for the writers are not always to be trusted. Look for old diaries, letters, newspaper clippings, and photograph albums; also any legal documents, school records, birth, marriage, and baptismal certificates, and government documents, such as passports, licenses, military paybooks, and income-tax forms. When interviewing or writing to relatives ask for access to this kind of material. And don't overlook old books, which may have names and dates written in them, and calling cards, letters, or bills slipped between the pages long ago for safekeeping.

The search for roots begins as a personal matter, but you soon find you're not alone in the quest. Genealogy serves to remind us that the world was all one family in the beginning. Although no one can trace his line that far back, it's remarkable how many common roots emerge when we go back a century or two. Once you have identified your family's original immigrant and where he came from, the search may become easier, for you may find a link to a prominent family whose history has already been charted. Most families that have lived in Canada for several generations come from the farming or middle classes, but I maintain that everyone will strike nobel or even royal blood if he goes back far enough. Sir Anthony Wagner, formerly garter king of arms and premier herald of England, says any family originating in Britain can produce at least one noble ancestor in the previous eight generations. The advantage here is that records of royalty and nobility are better preserved than those of farmers, because kingdoms, titles, and lands were at stake, and the slip of a genealogist's pen could start a lawsuit or a war.

Pursuing the McGiverns and their kin back into the Celtic twilight, I found a 12th-century Irish King, Niall of the Nine Hostages, and his descendant, Uidhrin, meaning he of the fair or sandy hair. His sons were Mag-Uidhrin, meaning son of Uidhrin, which became McGivern.

My mother was a MacDonald — Mary Ellen, from Port Hood — and once I had picked my way through the legions of MacDonalds (to use just one spelling of the name) in Nova Scotia, and found the original immigrant from Scotland, I could turn to existing research on the Clan Donald. Highland families seldom kept written records, but the clansmen had a remarkable memory for names and preserved their stories by learning and

reciting them. In my mother's family the head of the household would gather the boys together every Sunday after Mass — the girls could come, too, if they wished — and make them recite the names of their ancestors for 21 generations. This custom has, with the loss of the Gaelic language, been largely abandoned.

The first of my mother's line to settle in Canada arrived dramatically at a turning point in Canadian history. Early in the morning of Sept. 13, 1759, in the kilt of the Fraser Highlanders, Ronald MacDonald climbed the cliffs at Quebec with the vanguard of Wolfe's invaders. His company commander was Captain Donald McDonald, the French-speaking officer who fooled the French sentries into believing Wolfe's landing craft were friendly supply boats. Ronald is said to have told his captain the heights of Abraham were not nearly as steep as the cliffs around his home at Arisaig in Inverness-shire, which he had often climbed as a boy.

After the British victory at Quebec and the French surrender the following year, the Frasers were disbanded in Canada, and Ronald settled first in Prince Edward Island, then in Nova Scotia. He applied for a land grant of about 160 hectares in Broad Cove, Cape Breton. His brother, Angus, arrived in the 1780s in "the briganteen *Peggy*, Capt. Ritchie, from Glasgow" and was granted 40 hectares. I have no letters or diaries written by Ronald or Angus to describe their daily lives, but I know from contemporary accounts how they must have lived, so I have included these in my history. Everyone faced the same grim conditions. The pioneer farmer had to tackle virgin bush with an axe, a shovel, and a sack of seed potatoes. It's unlikely that he could afford a gun. His only enemy seems to have been the bear, which is why so many Cape Breton genealogies begin with "Rory the Bear" or "John the Bear," meaning that Rory or John had won fame by routing a bear with his axe.

Another danger was being hit by a tree while felling it. This is a frequent cause of death listed in parish records. However, the particular tree that killed Alexander Chisholm in Cape Breton in 1802 was the vital clue that enabled me to trace the Chisholm branch of my family back to Scotland and beyond, even to Charlemagne, to Alfred, to St. Louis of France, and to a host of others, among them El Cid, the great hero of Spain. I found a record of Alexander's fatal accident (and a record of his children), but no name of his widow. There were dozens of Alexander Chisholms in the area and no way of telling which was which. A history of the Chisholm family in Scotland showed that one of the many Alexanders had sailed for Canada about that time with his wife, Helen, and her two brothers. But was he the right Alexander? The Public Archives of Nova Scotia showed that a widow, Helen Chisholm, had petitioned for a land grant, mentioning that her husband had been killed by a falling tree, but she didn't give the husband's first name. More proof was needed. Finally, I found a ship's passenger list printed in the Antigonish *Casket*, listing Alexander, Helen, and their children, together with her brothers.

That clinched it. I could now trace the Chisholm line through its Scottish history back to Hereward, the English patriot who fought William the Conqueror at Ely in 1070. And I could add six saints to my family tree, not to mention innumerable others, some royal, some scoundrels.

It was a thrilling moment after a fascinating piece of detective work. There are similar thrills waiting for everyone who joins the ancestor hunt, although I should add that it's easier to find scoundrels than saints. More than that, there is satisfaction to be found in leaving a priceless treasury of family lore to your children and generations to come. □

And on the following page, here's how ...

Digging for your tree

Ron Cole

Rev. James McGivern: a hunger for finding ancestors that's marrow-deep

Begin your family history by writing down your own name. This is easy for you, but think how many times you've seen it misspelled by quite literate clerks, typists, and officials who didn't bother to get it right. Then imagine what may have happened to it in the past when literacy levels were low, writing was often illegible, and spelling wildly erratic. Write your name again and add every misspelling and mispronunciation you can think of, because any or all of these may crop up as you trace the name back. There are 400 possible spellings for Shakespeare, 13 for Smith, and 31 for one of my family names, Snyder. The churchmen who kept most early records of births, marriages, and deaths were literate — the word clerk comes from cleric — but sometimes too literate. English records were kept either in Latin, English, or Norman French and spellings changed accordingly. In recent times immigration officers at Canadian and U.S. entry points bluntly refused to spell difficult foreign names and changed them to the nearest English-sounding word. They created a great many "Smiths."

Forewarned, you advance into the spelling jungle. Buy or borrow a cassette tape recorder and interview

your relatives about their lives, careers, children, and parentages. Talk to them one at a time, ask the important questions first and don't let the interviews drag on more than an hour and a half. If you use a recorder with a built-in microphone they'll relax and forget it's there.

Try to get full names, exact addresses of family homes, and dates of family events, because you'll need to check these in official records in order to go farther back. When writing for information from friends and relatives explain that you're writing a family history, thank them for their cooperation in advance and again afterwards and, once more, try to get full and accurate names, dates and place names.

With this information you should have enough material for three generations of history. Start a pedigree chart, beginning with yourself and adding your parents, their parents and so on. (You can obtain chart forms from any of the many genealogical societies or stores dealing with family research). The word pedigree may remind you of prize poodles, but is the correct genealogical term and cannot be avoided. Each name on the chart is given a number. Put this number on a separate sheet containing all the additional information you have about the person and file the sheets in a loose-leaf binder.

To trace your line back beyond your grandparents you will probably require birth, marriage, and death certificates. These are available, for a search fee of $3 to $5 from provincial registrars, if the ancestor was born, married or died in Canada. By this time you'll have a good idea where your family came from and how easy or difficult it will be to trace your roots. This will depend on where they came from and when. Put in very general terms, Indian and Inuit people were here first, followed by the Acadian and Quebec French, several waves of Scots and Irish, Loyalists, mainly of English descent, who left the United States at the time of the revolution, then a wide variety of European and other groups.

French-Canadian roots are by far the easiest to trace, since nearly all the six million Canadians and two million Americans of French descent stem from the 60 000 who remained in New France after the colony surrendered in 1763. The keeping of records was compulsory in France before the colony was founded, so almost every French Canadian can trace his line back to the old country. Quebec records date back to about 1615 when the first priests arrived. The principal authority is the Dictionnaire Généalogique des Familles Canadiennes, compiled by the Abbé Cyprien Tanguay in the 1850s and updated in the 1950s. It is an enormous work. The Abbé searched baptismal records in Quebec and listed every name he could find up to the Conquest.

Records in English Canada are poor by comparison, incomplete and often missing when you get back to the mid-1800s. But the genealogical societies across Canada can advise you where to look for them. Public and church archives, cemetery records, local libraries that contain local histories, county court registries of wills — which provide revealing details of family relationships — are all useful. Census information would be more useful still, but the latest census open for public inspection is the first Dominion-wide one, taken in 1871. It's the pet peeve of all genealogists that they can't get at the information collected after that. Censuses taken in Upper Canada in 1841 to 1851 and in 1861 are available.

When you have found your original family immigrant, the temptation is to leap aboard a plane and fly to his homeland to discover more about him. This takes time and money. But you can get a great deal of information without leaving home. The world's greatest genealogy collection lies in bomb-proof vaults beneath a mountain near Salt Lake City, Ut. More than a million rolls of microfilm, recording 60 million ancestors from 126 countries, are kept there. It was gathered by the Church of Jesus Christ of Latter-Day Saints (the Mormons). Mormons are the world's most industrious genealogists, because they baptize their ancestors by proxy into their church, which was founded in the 1830s. Since ancestors living before that time were not Mormons the church members collect names from all faiths, and their great library is open to everyone. Apply to the nearest Mormon library — there are 220 in the United States and Canada — and for a modest service charge you can view its microfilms or order rare records from Salt Lake City. More than 500 000 searchers visit the central library each year where they can view, for example, most of the parish records available in England. There are also pedigree researchers who will, for a fee (often less than $50), follow your own chart back as far as they can. They may draw a blank or add 15 generations to your family tree. The General Church Distribution Centre, P.O. Box 11627, Salt Lake City, Ut., 84111, has lists of genealogical information and sources in many countries, available for about $1.40 each. State which country interests you.

When searching for records abroad you'll find that some countries maintain central registries, others leave this to states, provinces, or municipalities. The earliest records were kept by churches, beginning in the 16th century, but many of these are incomplete or have been lost or destroyed during wars and religious upheavals. Some eastern European countries suspect genealogists of trying to prove noble descent — frowned upon in Communist society — and refuse to provide information. But no matter where your ancestors come from it's worth asking the Canadian embassy or consulate of the country how to get information.

Sources of birth, marriage, and death records in the United Kingdom are:

England and Wales: The General Register Office, St. Catharine's House, 10 The Kingsway, London WC2.

Scotland: The General Register Office, New Register House, Edinburgh.

Northern Ireland: The General Register Office, Oxford House, Chichester Street 1, Belfast.

For Republic of Ireland records write the Register General, Custom House, Dublin, 1.

An excellent reference source for other countries is *Searching for your Ancestors,* by Gilbert H. Duane, Bantam Books, New York.

For researching in France, a good reference book is *La Généalogie* by Pierre Durye, published in the series *Que sais-je?* (no. 917). □

Rev. James McGivern is the archivist of the Roman Catholic Archdiocese of Toronto.

in Closing

In the house where I live, in a town that is well outside the city, I have a room that is my own. From the window, in the summer, I can see a schoolyard, a field of wild flowers and, in the distance, a row of tall spruce trees out of which peaks the spire of a small church where, on Sunday mornings, the sound of the bell is the only sound upon the soft and sleeping air.

I do not live in the room, but for me it is the most important room in all of life, more important to all that I do than the office where I work or the other rooms in which I eat or rest or talk or, more often, listen to others talk. Some people might call this room an office, but I do not. For when I enter it, as I do first thing every evening when I return from the city, I do not feel that I am entering an office once again to wrestle with the world in a losing battle, so much as to loosen the necktie, skim the mail, and turn on the radio, hoping for Mozart but willing to settle for less. I do not call this room a library, for that is pretentious, or a den, for when I hear the word I think of bearskins on the floor and shotguns on the wall. My room, I suppose, is really rather ordinary. From years of habit I call it the study.

It is on the second floor with a view to the south and — especially in the winter when the tree against the window is bare — a bit of the east, where I can see, but never quite hear, the ribbon of traffic that runs past the town, rarely slowing and never pausing, except on Sundays, early in the morning, which is pleasant in summer, since that is the time when the bell in the church begins to ring.

The room is not large; it is, I tend to think, about three-quarters the size of most kitchens I know. On the floor is a carpet, orange with brown shadows, and on three of the walls, which are yellow, are the shelves for books and the small things I gather and place there. On the fourth wall, which is to the east, is a mural, a field of daisies that becomes a forest of tall and languid trees. There is something about the forest — its common but sincere invitation to a walk — that goes with my room and suits my nature. There is also a desk, an old typewriter, a bookcase made for me by my son and, beside the window, a leather chair, one that reclines beneath an overhanging lamp and is used so often that it has been to the upholsterer twice.

Last Sunday after lunch I went to the study once again and sat there most of the afternoon. I was thinking about my room — a modest and quiet place — and why it, more than other rooms like it that I have had in the past, offers so much — expectation, serenity and, most of all, a communion with the interior world. I thought for awhile about the last study I had, seven or eight years ago, when I lived in the city, a room that set out to be a study, but ended up

being an office, with a set of filing cabinets, a huge desk, and a telephone that seemed to ring simply because I opened the door.

At the time I was a columnist, writing daily in *The Globe and Mail*, an honored work on an honored paper, but for me, at least, a job that owned every moment of my consciousness, that filled every corner of my mind, so that I began to feel like a man running a race in which the finish line was forever out of sight. Into my study, almost daily, came interesting and memorable people, urging me as a columnist to use my influence to stop noise, improve education, raise morals, and lower taxes. Once, on Christmas Day, 1971, a good-natured man — who, I learned later, was well-known in the cigar business — showed up unannounced, a Bible under his arm, saying that as a regular reader of mine he would like, preferably then and there, to discuss the future of my soul, a matter that was of interest to me, but of vital concern to him. I shall never forget such people; they honored me with their attention. But they also helped to turn my study into an office. The air was filled with their urgencies.

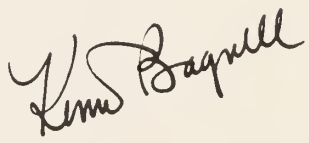
The problem, looking back on it now, is that a study, no matter who occupies it, is made for reflection, while an office is made for assertion. Only occasionally may a study be used for figuring out income tax or, at the insistence of a spouse, be loaned for an evening to someone wanting to type up a class project on the issues that face the nuclear family undergoing the stress of the modern megalopolis. (I can see no harm in this, provided the person who uses the study dislodges no books, opens no drawers, disturbs no papers, and leaves the margins on the typewriter set exactly as they were when I last used it.)

Sometimes those who do not have a study or do not feel a desire to own one look upon those who do as solitary antiquarians who are comfortable only with themselves and the voiceless books that line their walls. Such people do not understand us. For along with books we have friendships with magazines, journals, and periodicals, so many that every few months we must clean house ruthlessly or else be engulfed in a surging tide made up of *The New Yorker, Atlantic,The Observer, Harpers, The Christian Century, Quill & Quire, Maclean's, America, Saturday Night, The Presbyterian Record, Calgary Magazine, Esquire, Quest, The Financial Post, Rolling Stone, Books in Canada, The Hockey News,* and *The Ajax Advertiser.*

As a matter of fact, anyone who uses a study will tell you that it does not turn its inhabitant into a hermit at all but, by some signal that is as strong as it is subtle, it has the opposite effect, causing him every so often to close the books and deliberately seek out social contact in the kitchen or elsewhere. It is as if the study, which after all is a place of ideas that try to keep us human, lets us know after an hour in its silence that it is time to speak or listen or reach out to another. And so, every so often, as I read or try to write and find a dark cloud settling over the typewriter, I get up and seek a relationship by inspecting the birdhouses or going to the corner garage to put air in the tires.

This spring, a young man I know — who has in the past used the study fairly often — moved to a distant city and to a room of his own. I took him to the city, but I did not see the room, preferring to leave that to his choice and to his maturing taste. He has told me that his room is on the third floor and that it has a window at the front and another at the back. It sounds fine.

He is living there now, and with him he took his father's hope that his room is a friendly companion and that each time he opens the door, he finds himself where he has dreamed of being.



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